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The Trusted Integrator for Sustainable Solutions

February 18, 2010

John Gorman
Acting Chief, Pesticides & Toxic Substances Branch
U.S. EPA Region II
2890 Woodbridge Avenue (MS-105)
Edison, NJ 08837-3679

Re: Interim Remedial Measure Remedial Action Workplan and Engineering and Monitoring Control Plan for LNAPL Removal, dated August 4, 2009
Hatco Chemical Corporation
1020 King George Post Road
Fords, Woodbridge Twp, Middlesex County, NJ
SRP PI No.: G000003943, EA No.: RPC000001

Dear Mr. Gorman:

This letter provides Weston Solutions, Inc's (Weston®) response to the U.S. Environmental Protection Agency's (USEPA) letter dated 8 December 2009 regarding USEPA's review of the above referenced document prepared by Weston. The Revised Interim Remedial Measure (IRM) Remedial Action Workplan (RAWP) will be provided shortly.

The USEPA comments presented in the 8 December 2009 correspondence are reiterated below, with Weston's response following each comment.

General Comments

The Issue of Excavation versus Pumping: As you are aware, EPA has had ongoing concerns with Weston pumping LNAPL (in lieu of excavation) in the areas immediately north, south, and west of the ZAA Dryer Building. Based on the information provided in your September 9, 2009 electronic correspondence, EPA agrees that pumping in the north and west areas is appropriate, provided that Weston agrees to the Agency's approach to soil sampling, as discussed below. With regard to the area south of the ZAA Building, EPA maintains that this entire area must be excavated, since this is the location of former Pond Number 3. The Agency will not accept a partial excavation of this former pond, as it is proposed in Weston's IRM RAWP.

Weston Response: Weston acknowledges EPA's concerns with regard to former Pond Number 3 soils and agrees to expand the excavation to include the area south of the ZAA Dryer Building and east of the Effluent Pretreatment (EPT) Plant. Weston has redesigned the LNAPL recovery system to take into account this change. The modified LNAPL recovery system is described in the Revised IRM Plan attached to this letter.

Post-LNAPL Removal Confirmation Soil Sampling: Weston is proposing the installation of soil borings, using a 30-foot by 30-foot grid across the area that is to be addressed by the IRM.

EPA disagrees with this grid size; we believe that a 20-foot by 20-foot grid is more appropriate for use in the IRM area. While less stringent than the requirements of 40 CFR Subpart O, this grid size will provide a sufficient level of confidence in the post-IRM contamination levels, with the exception of the area north of the ZAA Building. In the area north of the ZAA Building, EPA believes that a grid size of 5-feet by 5-feet is more appropriate, which is in accordance with the verification sampling requirements of 40 CFR Subpart O (i.e., 1.5 meters, which is approximately 5 feet). EPA's rationale for this grid size is that this area is in the location of Former Ponds Number 1 and Number 2, and since these ponds will not be excavated, the Agency needs confidence in the post-IRM contamination levels within this area.

Weston Response: Weston has revised the post-IRM Confirmatory Sampling Plan accordingly to incorporate a 5-foot grid spacing north of the ZAA Building, as well as a 20-foot grid spacing throughout the remainder of the LNAPL recovery area. Please refer to Figures A1 and A2 of the Revised IRM for plan views of grid sampling locations. .

Specific Comments

USEPA Comment - Section 1 – Introduction: The last sentence in the next to the last paragraph on Page 1-3 states that, upon request, Weston will provide the design details of the IRM in a progress report. Please be advised that the Agency is hereby now requesting this information.

Weston Response: Understood. Weston will provide EPA with the design details of the IRM in a progress report once they are complete. It is our understanding that these design details will be provided to EPA for informational purposes only and will not require review and approval by EPA before implementation.

USEPA Comment - Section 2.1 – LNAPL Characteristics and Occurrence: The text on Page 2-3 discusses LNAPL concentrations as high as 12,000 parts per million (ppm). However, we recall that there is data indicating that the PCB concentrations in the LNAPL are higher than that. Please verify the highest levels of PCBs that have been found in the LNAPL to date at the Site.

Weston Response: Weston performed a detailed review of all historical and recent LNAP sample data. Results of this review are included in the Revised IRM RAWP. To summarize, LNAPL was found to contain PCBs at concentrations as high as 15,000 ppm. One LNAPL sample collected in May 1994 contained Aroclor-1248 at 90,000 mg/kg. Since the same well contained concentrations ranging from 1200 to 1400 mg/kg in April and May 1994, this sample appears to be a statistical outlier. No information on sample methodology or site conditions is available.

USEPA Comment - Section 3.2 – Active LNAPL Removal: The text on Page 3-5 discusses a proposed discharge to the Middlesex County Utility Authority (MCUA). Please provide the status of the MCUA approval and of the selection of the specific discharge location.

Weston Response: Weston has completed an initial screening of alternative MCUA discharge locations and determined that the most viable solution is to discharge treated water into Hatco's (Chemtura's) privately-owned 10-inch diameter gravity sewer line that currently conveys their pretreated wastewater to the MCUA. This line has sufficient capacity based on historical and current use. We have met with both Chemtura and the MCUA concerning this proposed temporary discharge point and both parties are supportive. We are in the process of finalizing discharge limits and monitoring requirements with MCUA. We anticipate finalizing the tie-in approach as part of the system design, subject to the approval of both Chemtura and MCUA.

USEPA Comment - Section 3.3 – LNAPL Recovery and Groundwater Treatment: Please verify the anticipated operational period for the IRM. Page 3-6 provides a timeframe of 1.5 to 6.5 years, while the estimated timeframe provided on Page 3-10 is 1.5 to 5 years, with an additional 2 years to address the LNAPL and the groundwater below the Ester I and Acid Tank Farm.

Weston Response: The anticipated operational period for the IRM is 1.5 to 6.5 years for the recovery wells with an additional 2 years for the LNAPL below the Ester I and Acid Tank Farms. The Revised IRM Plan has been modified to clarify this. EPA should note however that, as stated in the IRM plan, there is uncertainty associated with estimation of LNAPL recovery rates and remediation time. The values provided represent our best estimate at this time. A more accurate estimate of the remediation time will be provided after installation and operation of the first phase of the recovery system as described in the IRM Plan.

USEPA Comment - Section 3.3.1 – Effluent Requirements: Table 1 provides an anticipated MCUA monthly average discharge limit for PCBs of less than 3 parts per billion (the detection limit). However, EPA believes that a monthly average limit is inconsistent with the requirements of 40 CFR 761.79, and that 3 parts per billion should be the maximum limit for any discharge of PCBs to the MCUA.

Weston Response: Weston agrees with the comment. We have had preliminary discussions with MCUA and it is anticipated that the discharge limit will be set at 3 micrograms per liter for all samples (not a monthly average). We will revise Table 1 to indicate <3.0 µg/L for PCBs for any sample. Please note that the discharge limits shown in Table 1 are estimated pending ongoing negotiations with MCUA. Weston will continue to update USEPA as we finalize the discharge location and permit requirements with MCUA.

USEPA Comment - Section 3.3.2 – Phase II System: The second bullet on Page 3-14 describes the location of the full scale LNAPL recovery and groundwater treatment system. Please confirm whether any PCB contamination is present within the system's footprint.

Weston Response: The proposed location of the LNAPL and groundwater treatment system is shown on Figure 4 of the IRM Plan. There are PCBs in soil at this location at concentrations less than 500 mg/kg but greater than 2 mg/kg. This area will be part of the engineered cap that will prevent human contact with PCBs greater than 2 mg/kg. The floor slab of the building will be

incorporated into the engineered cap design. The proposed location does not fall within any known or suspected disposal areas (former ponds, muck areas, lagoons, debris areas, etc).

USEPA Comment - Section 3.4 – LNAPL Recovery Monitoring: The text of this section states that during Phase II operations LNAPL thickness measurements will be made on a weekly basis for the first month and then on a monthly basis for the next year. Please clarify what the measurement frequency will be after that.

Weston Response: After the first year of monthly LNAPL thickness monitoring, the measurement frequency will be reduced to quarterly. However, as the LNAPL plume is reduced and the cleanup goal of no visible LNAPL is approached, the monitoring frequency will likely be increased as discretionary measurement rounds are conducted. Two years of monthly LNAPL monitoring will be performed after the cleanup goal of no visible LNAPL has been achieved to verify compliance.

USEPA Comment - Section 7 – Reporting: Please clarify the phrase in the first sentence on Page 7-1, which states that quarterly progress reports will be prepared annually.

Weston Response: The sentence has been corrected to read, "Quarterly progress reports will be prepared in accordance with..."

USEPA Comment - Section 8 – Implementation Schedule: At this point, the schedule should not include specific milestone dates, but just present task durations based upon EPA and NJDEP approval of the document. Additionally, the schedule anticipates eventual release from the NJDEP Administrative Consent Order. Please note that there will not be any release from the EPA risk-based disposal approval, as long as PCBs above the self-implementing levels of the regulations remain on the Site.

Weston Response: The project schedule has been updated in accordance with EPA's request as Figure 6 in the updated IRM RAWP.

Comments on Attachment 1- Confirmation Sampling Plan (CSP)

USEPA Comment - Section 2.0 – Sampling and Analysis Design: Please clarify the sampling requirements for those areas of the LNAPL plume that will be excavated.

Weston Response: The sampling requirements for those portions of the LNAPL plume that will be excavated are described in the Addendum 3 to the RAWP. Since excavation of these areas is not considered part of the interim response measure, these requirements are not described in the IRM RAWP. Section 2 has been amended to explain that the sampling requirements for the portions of the LNAPL plume that will be excavated are presented in Addendum 3 to the RAWP.

USEPA Comment - Section 2.2 – Post-LNAPL Removal Confirmation Soil Sampling: With the exception of grid nodes that may fall on structures or active utilities, we do not recommend shifting any of the nodes. For areas where PCBs were historically found at concentrations of 500

ppm or more within the IRM treatment zone and are not collocated with a grid node, we recommend that additional soil borings should be installed in those areas.

Weston Response: Additional samples have been proposed for those areas where PCBs were historically found at concentrations of 500 ppm or more within the IRM treatment zone, as noted in Section 2.2.2 and Table 1C of the IRM Confirmation Sampling Plan. Those samples where PCBs were historically detected at 500 ppm or more that are not co-located with the LNAPL plume are addressed within Addendum 3 to the RAWP, which was submitted under separate cover.

USEPA Comment - Section 2.3 – Wastewater Discharge Sampling Program: The last sentence of this section (on Page 9) indicates that upon request, Weston will provide updated MCUA permit requirements. Please be advised that the Agency is hereby now requesting this information.

Weston Response: Weston has discussed the treated discharge with MCUA and Hatco. Upon Weston's design of the LNAPL recovery system, Weston will apply for the MCUA discharge permit. Once Weston receives the MCUA permit, Weston will update Table 2, which identifies the analytical parameters, matrix, preparation and analytical methods, and container, preservation, and holding time requirements, and Table 3, which identifies the anticipated number of samples upon finalization of the MCUA permit and submit those tables to EPA and NJDEP at that time.

USEPA Comment - Section 3.2 – Soil Sample Collection Methodology: The text on Page 10 explains that the IRM may potentially drag the smear zone lower than it currently is, and so the lowest vertical sample for each grid node will be within the 2-foot interval below the lowest observed LNAPL limit from the 2007 pre-design sampling program. We do not understand how Weston knows at this point that the LNAPL will not be dragged lower than this. A contingency for additional (deeper) sampling based on observed field conditions should be included in CSP.

Weston Response: Agreed. It is not possible to accurately predict how the LNAPL will behave in response to the recovery system at this point. A contingency for deeper sampling based on observed field conditions has been added to the Revised CSP.

Additionally, the last sentence on Page 10 states that the Macro-Core bit will be decontaminated between locations. Please note that this decontamination must be performed in accordance with 40 CFR 761.79.

Weston Response: Understood. Text referencing the decontamination standard in 40 CFR 761.79 has been added to the Revised CSP.

Finally, the last sentence of this section states that if multi-phasic materials are encountered during the post-IRM confirmatory soil sampling program, only the soil phase will be analyzed. We disagree with this approach, and request that Weston collect and analyze samples of any other phases that are encountered.

Weston Response: Based on further clarification from EPA via email, Weston understands this comment/request to pertain only to NAPL or product phases and not water (aqueous phase). With this understanding, Weston agrees to analyze separate-phase NAPL or product in any sample that contains sufficient volume to facilitate laboratory analysis. Whether sufficient volume is contained within any given sample shall be determined by the laboratory conducting the analysis. The text of the Revise CSP has been modified to reflect this change.

USEPA Comment - Section 3.4.2 – Sample Volumes and Containers: There is a minor typographical error in the first sentence of the second paragraph on Page 12. The word "metric" should be "matrix".

Weston Response: The typographical error has been corrected.

USEPA Comment - Section 5.0 – Field Decontamination: The decontamination procedures specified in this section do not appear to comply with the requirements of 40 CFR 761.79. Weston must ensure that all decontamination activities associated with the IRM are performed in accordance with the Federal PCB regulations.

Weston Response: In accordance with the requirements of 40 CFR 761.79(c)(2)(i), surfaces that have come into contact with PCBs will be swabbed with hexane. Note that dedicated disposable surfaces (e.g., Geoprobe acetate liners) will not be decontaminated prior to being managed as waste.

USEPA Comment - Section 6.0 – Investigation-Derived Waste Management: Since this section is written in very general terms, please provide for Agency approval, prior to actual disposal, the details on management of the investigation-derived waste; e.g., identification of the specific wastestream(s), their respective PCB levels, and the disposal facilities that Weston will use.

Weston Response: The text of Section 6.0 has been modified to document that information identifying specific waste streams, respective PCB levels, and disposal facilities will be provided to US EPA for approval prior to actual disposal.

If you have any questions, please do not hesitate to contact me at 732-417-5834.

Sincerely,

WESTON SOLUTIONS, INC.

Daniel Kopcow, P.E., P.M.P
Project Manager

cc: L. Vogel, NJDEP
P. Meyer, S. Castles (Chemtura)
V. Puranapanda, G. Kramer, C. Stella, S. Piatkowski (ACE)